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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/615,277	07/07/2003	Victor Pinto	ZRAN.038US0	8223
36257 7590 10/22/2007 DAVIS WRIGHT TREMAINE LLP 505 MONTGOMERY STREET SUITE 800 SAN FRANCISCO, CA 94111			EXAMINER SELBY, GEVELL V	
			ART UNIT 2622	PAPER NUMBER
			NOTIFICATION DATE 10/22/2007	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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tracyknox@dwt.com

<b>Office Action Summary</b>	<b>Application No.</b>		<b>Applicant(s)</b>	
	10/615,277		PINTO ET AL.	
	<b>Examiner</b>		<b>Art Unit</b>	
	Gevell Selby		2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 16 August 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 4, 5, 14 and 15 is/are allowed.
- 6) ☒ Claim(s) 1-3, 6-13, 16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 5/21/07 has been entered.

### ***Response to Arguments***

2. Applicant's arguments with respect to claims 1-3, 6-13, and 16 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 1-3, 6-13, and 16 rejected under 35 U.S.C. 103(a) as being unpatentable over Kakarala, et al., US 2004/0051798.**

In regard to claim 1, Kakarala, et al., US 2004/0051798, discloses a method of distinguishing high quality elements from potentially defective elements in an array of

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photo-sensitive elements while illuminated with an object field of varying light intensity thereacross, comprising:

calculate a plurality difference values between outputs of individual ones of the elements and a plurality of neighboring elements (see figure 5A, steps 504-508 and para 47-52: the difference values are calculated when computing the gradients of the neighboring pixels),

determine the signs of the difference values for a given one of the individual elements (see figure 5A, steps 514 and 516 and para 54: signs are determined by comparing the difference value to zero);

examine the signs of the difference values (see para 54 and 55: the signs are examined to determine whether the elements is a local maximum or minimum).

The Kakarala reference does not specifically disclose wherein if the difference values for the given one of the individual elements have different signs, identify the given element to be of high quality and if the difference values for the given element have the same signs, identify the given element to be potentially defective and only thereafter proceed to compare the difference values with at least one. The difference values in the Kakarala reference are determined by subtracting the previous neighboring pixel from the target pixel and subtracting the target pixel from the following neighboring pixel (see para 47-52). This makes the evaluation for a local minimum or maximum pixel be determined by whether the difference values have different signs or one is greater than zero and the other is less than zero and is further processed by comparing to a threshold

to determine if it is defective (see para 71 and 81). The difference values with the same sign are then determined to be the pixel without defects. This seems reverse from the claimed invention; however since the difference values are not both calculated by subtracting the neighboring pixel from the target pixels, the evaluation for the signs to determine minimum and maximum pixels becomes reversed.

It is well known to one of ordinary skill in the art that the calculation and evaluation in the Kakarala reference is the mathematical equivalent of determining the difference values by subtracting the neighboring pixel value from the target pixel value for both the previous and following pixels and then determining a local maximum or minimum by whether the difference values have the same sign or both are greater than or less than zero and thus pixels may be defective. Then the difference values with different signs or one is less than zero and the other is greater than zero are the pixels without defects.

Therefore it would have been an obvious design choice to modify the Kakarala reference to determine the difference values by subtracting the neighboring pixel value from the target pixel value for both the previous and following pixels determine a local maximum or minimum by whether the difference values have the same sign or both are greater than or less than zero and thus pixels may be defective, and then the difference values with different signs or one is less than zero and the other is greater than zero are the pixels without defects, in order to save time by not having to compare all the neighboring pixels to determine none defective pixels. The modified Kakarala reference would then disclose wherein if the difference values for the given one of the individual

elements have different signs, identify the given element to be of high quality and if the difference values for the given element have the same signs, identify the given element to be potentially defective and only thereafter proceed to compare the difference values with at least one.

In regard to claim 2, Kakarala, et al., US 2004/0051798, discloses a method of identifying and correcting defective ones of an array of photo-sensitive pixels, comprising:

directing an object field of varying light intensity across the array (see para 29), calculating difference values between outputs of individual ones of the pixels and a plurality of neighboring pixels (see figure 5A, steps 504-508 and para 47-52),

determine the signs of the difference values for a given one of the individual pixels (see figure 5A, steps 514 and 516 and para 54: signs are determined by comparing the difference value to zero);

examine the signs of the difference values (see para 54 and 55: the signs are examined to determine whether the elements is a local maximum or minimum);

if the difference values are not in excess of the threshold, utilizing the output of the given pixel for data of the object field (see figure figures 5B, step 546 and 5C, step 576), and

if the difference values are in excess of the threshold, calculating a value of the given pixel from at least some of the neighboring pixels and utilizing the

calculated pixel value in data of the object field (see fig. 5B, step 548 and 5B, step 578).

The Kakarala reference does not specifically disclose wherein if the difference values for a given one of the pixels have different signs, utilizing the output of the given pixel for data of the object field without comparing the difference values with a threshold, if the difference values for the given pixel have the same sign, determining whether the difference values are in excess of a threshold. The difference values in the Kakarala reference are determined by subtracting the previous neighboring pixel from the target pixel and subtracting the target pixel from the following neighboring pixel (see para 47-52 This makes the evaluation for a local minimum or maximum pixel be determined by whether the difference values have different signs or one is greater than zero and the other is less than zero and is further processed by comparing to a threshold to determine if it is defective (see para 71 and 81). The difference values with the same sign are then determined to be the pixel without defects. This seems reverse from the claimed invention; however since the difference values are not both calculated by subtracting the neighboring pixel from the target pixels, the evaluation for the signs to determine minimum and maximum pixels becomes reversed.

It is well known to one of ordinary skill in the art that the calculation and evaluation in the Kakarala reference is the mathematical equivalent of determining the difference values by subtracting the neighboring pixel value from the target pixel value for both the previous and following pixels and then determining a local maximum or minimum by whether the difference values have the same sign or both are greater than or

less than zero and thus pixels may be defective. Then the difference values with different signs or one is less than zero and the other is greater than zero are the pixels without defects.

Therefore it would have been an obvious design choice to modify the Kakarala reference to determine the difference values by subtracting the neighboring pixel value from the target pixel value for both the previous and following pixels determine a local maximum or minimum by whether the difference values have the same sign or both are greater than or less than zero and thus pixels may be defective, and then the difference values with different signs or one is less than zero and the other is greater than zero are the pixels without defects, in order to save time by not having to compare all the neighboring pixels to determine none defective pixels. The modified Kakarala reference would then disclose wherein, if the difference values for a given one of the pixels have different signs, utilizing the output of the given pixel for data of the object field without comparing the difference values with a threshold, if the difference values for the given pixel have the same sign, determining whether the difference values are in excess of a threshold.

In regard to claim 3, Kakarala, et al., US 2004/0051798, discloses the method of claim 2, wherein said threshold includes either of at least first or second quantities that are different from each other depending upon whether said same sign is positive or negative (see figure 5A, steps 514-517: if sign is positive determines threshold using max of gradients (fig. 5B) and if sign is negative determines threshold using min of gradients (fig. 5C)).



In regard to claim 6, Kakarala, et al., US 2004/0051798, discloses the method of claim 2, wherein determining whether the difference values are in excess of a threshold includes determining whether positive difference values are in excess of a first threshold and negative difference values are in excess of a second threshold different from the first threshold (see figure 5A, steps 514-517: if sign is positive determines threshold using max of gradients (fig. 5B) and if sign is negative determines threshold using min of gradients (fig. 5C)).

In regard to claim 7, Kakarala, et al., US 2004/0051798, discloses a method of distinguishing high quality elements from potentially defective elements in an array of photo-sensitive elements while illuminated with an object field of varying light intensity thereacross, comprising:

- maintaining at least one threshold quantity (see fig. 5B, step 534 and fig. 5C, step 564),

- calculating difference values between outputs of individual ones of the elements and neighboring elements (see figure 5A, steps 504-508 and para 47-52),

- determine the signs of the difference values for a given one of the individual pixels (see figure 5A, steps 514 and 516 and para 54: signs are determined by comparing the difference value to zero);

- examine the signs of the difference values (see para 54 and 55: the signs are examined to determine whether the elements is a local maximum or minimum).

The Kakarala reference does not specifically disclose if the difference values for a given one of the individual elements have different signs, identifying the given element to be of high quality without comparing the difference values of the given element with the at least one threshold quantity, and if the difference values for the given element have the same signs, proceed to compare the difference values with the at least one threshold quantity in order to determine whether the given element is defective.

The difference values in the Kakarala reference are determined by subtracting the previous neighboring pixel from the target pixel and subtracting the target pixel from the following neighboring pixel (see para 47-52). This makes the evaluation for a local minimum or maximum pixel be determined by whether the difference values have different signs or one is greater than zero and the other is less than zero and is further processed by comparing to a threshold to determine if it is defective (see para 71 and 81). The difference values with the same sign are then determined to be the pixel without defects. This seems reverse from the claimed invention; however since the difference values are not both calculated by subtracting the neighboring pixel from the target pixels, the evaluation for the signs to determine minimum and maximum pixels becomes reversed.

It is well known to one of ordinary skill in the art that the calculation and evaluation in the Kakarala reference is the mathematical equivalent of determining the difference values by subtracting the neighboring pixel value from the target pixel value for both the previous and following pixels and then determining a local maximum or minimum by whether the difference values have the same sign or both are greater than or

less than zero and thus pixels may be defective. Then the difference values with different signs or one is less than zero and the other is greater than zero are the pixels without defects.

Therefore it would have been an obvious design choice to modify the Kakarala reference to determine the difference values by subtracting the neighboring pixel value from the target pixel value for both the previous and following pixels determine a local maximum or minimum by whether the difference values have the same sign or both are greater than or less than zero and thus pixels may be defective, and then the difference values with different signs or one is less than zero and the other is greater than zero are the pixels without defects, in order to save time by not having to compare all the neighboring pixels to determine none defective pixels. The modified Kakarala reference would then disclose wherein, if the difference values for a given one of the individual elements have different signs, identifying the given element to be of high quality without comparing the difference values of the given element with the at least one threshold quantity, and if the difference values for the given element have the same signs, proceed to compare the difference values with the at least one threshold quantity in order to determine whether the given element is defective.

In regard to claim 8, Kakarala, et al., US 2004/0051798, discloses the method of claim 7, wherein calculating difference values includes calculating difference values between outputs of individual ones of the elements and at least four surrounding neighboring elements, thereby calculating at least four difference values for individual ones of the elements (see para 47-52).

In regard to claim 9, Kakarala, et al., US 2004/0051798, discloses the method of claim 8, wherein the given element is identified to be of high quality when at least one of the at least four difference values has a different sign than the other difference values (see figure 5A, steps 514, 516, and 518: pixel is not a max or min, so at least one of the difference values has a different sign).

In regard to claim 10, Kakarala, et al., US 2004/0051798, discloses a method of identifying and correcting defective ones of an array of photo-sensitive pixels, comprising:

- directing an object field of varying light intensity across the array (see para. 29),

- calculating difference values between outputs of individual ones of the pixels and a plurality of neighboring pixels (see figure 5A, steps 504-508 and para 47-52),

- determine the signs of the difference values for a given one of the individual pixels (see figure 5A, steps 514 and 516 and para 54: signs are determined by comparing the difference value to zero);

- examine the signs of the difference values (see para 54 and 55: the signs are examined to determine whether the elements is a local maximum or minimum);

- if the difference values are not in excess of the threshold, utilizing the output of the given pixel for data of the object field (see figure figures 5B, step 546 and 5C, step 576), and

if the difference values are in excess of the threshold, calculating a value of the given pixel from at least some of the neighboring pixels and utilizing the calculated pixel value for data of the object field (see fig. 5B, step 548 and 5B, step 578).

The Kakarala reference does not specifically disclose if the difference values for a given one of the pixels have different signs, utilizing only that result to conclude that the given pixel is not defective and thereafter using the output of the given pixel for data of the object field, and if the difference values for the given pixel have the same sign, determining whether the difference values are in excess of a threshold.

The difference values in the Kakarala reference are determined by subtracting the previous neighboring pixel from the target pixel and subtracting the target pixel from the following neighboring pixel (see para 47-52). This makes the evaluation for a local minimum or maximum pixel be determined by whether the difference values have different signs or one is greater than zero and the other is less than zero and is further processed by comparing to a threshold to determine if it is defective (see para 71 and 81). The difference values with the same sign are then determined to be the pixel without defects. This seems reverse from the claimed invention; however since the difference values are not both calculated by subtracting the neighboring pixel from the target pixels, the evaluation for the signs to determine minimum and maximum pixels becomes reversed.

It is well known to one of ordinary skill in the art that the calculation and evaluation in the Kakarala reference is the mathematical equivalent of determining the

difference values by subtracting the neighboring pixel value from the target pixel value for both the previous and following pixels and then determining a local maximum or minimum by whether the difference values have the same sign or both are greater than or less than zero and thus pixels may be defective. Then the difference values with different signs or one is less than zero and the other is greater than zero are the pixels without defects.

Therefore it would have been an obvious design choice to modify the Kakarala reference to determine the difference values by subtracting the neighboring pixel value from the target pixel value for both the previous and following pixels determine a local maximum or minimum by whether the difference values have the same sign or both are greater than or less than zero and thus pixels may be defective, and then the difference values with different signs or one is less than zero and the other is greater than zero are the pixels without defects, in order to save time by not having to compare all the neighboring pixels to determine none defective pixels. The modified Kakarala reference would then disclose wherein, if the difference values for a given one of the pixels have different signs, utilizing only that result to conclude that the given pixel is not defective and thereafter using the output of the given pixel for data of the object field, and if the difference values for the given pixel have the same sign, determining whether the difference values are in excess of a threshold.

In regard to claim 11, Kakarala, et al., US 2004/0051798, discloses a method of generating a sequence of signal outputs from individual photo-sensitive elements in an

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array while the array is illuminated with an object field of varying light intensity thereacross, comprising:

calculating a plurality of difference values between outputs of individual ones of the elements and outputs of a plurality of neighboring elements pixels (see figure 5A, steps 504-508 and para 47-52),

determine the signs of the difference values for a given one of the individual elements in sequence (see figure 5A, steps 514 and 516 and para 54),

examine the signs of the difference values (see para 54 and 55: the signs are examined to determine whether the elements is a local maximum or minimum);

if the difference values exceed the threshold, calculate a quantity corresponding to the output of the given element from the outputs of the neighboring elements and use the calculated quantity as said one of the sequence of signal outputs of the array instead of the actual output (see fig. 5B, step 548 and 5B, step 578).

The Kakarala reference does not specifically disclose if the difference values for the given one of the individual elements have different signs, utilize the actual output of the given element as one of the sequence of signal outputs of the array, and if the difference values for the given element have the same signs, only then proceed to compare magnitudes of the difference values with at least one threshold.

The difference values in the Kakarala reference are determined by subtracting the previous neighboring pixel from the target pixel and subtracting the target pixel from the

following neighboring pixel (see para 47-52). This makes the evaluation for a local minimum or maximum pixel be determined by whether the difference values have different signs or one is greater than zero and the other is less than zero and is further processed by comparing to a threshold to determine if it is defective (see para 71 and 81). The difference values with the same sign are then determined to be the pixel without defects. This seems reverse from the claimed invention; however since the difference values are not both calculated by subtracting the neighboring pixel from the target pixels, the evaluation for the signs to determine minimum and maximum pixels becomes reversed.

It is well known to one of ordinary skill in the art that the calculation and evaluation in the Kakarala reference is the mathematical equivalent of determining the difference values by subtracting the neighboring pixel value from the target pixel value for both the previous and following pixels and then determining a local maximum or minimum by whether the difference values have the same sign or both are greater than or less than zero and thus pixels may be defective. Then the difference values with different signs or one is less than zero and the other is greater than zero are the pixels without defects.

Therefore it would have been an obvious design choice to modify the Kakarala reference to determine the difference values by subtracting the neighboring pixel value from the target pixel value for both the previous and following pixels determine a local maximum or minimum by whether the difference values have the same sign or both are greater than or less than zero and



thus pixels may be defective, and then the difference values with different signs or one is less than zero and the other is greater than zero are the pixels without defects, in order to save time by not having to compare all the neighboring pixels to determine non-defective pixels. The modified Kakarala reference would then disclose wherein, if the difference values for the given one of the individual elements have different signs, utilize the actual output of the given element as one of the sequence of signal outputs of the array, and if the difference values for the given element have the same signs, only then proceed to compare magnitudes of the difference values with at least one.

In regard to claim 12, Kakarala, et al., US 2004/0051798, discloses the method of claim 11, wherein said at least one threshold includes at least first and second threshold quantities that are different from each other (see figure 5A, steps 514-517: if sign is positive determines threshold using max of gradients (fig. 5B) and if sign is negative determines threshold using min of gradients (fig. 5C)).

In regard to claim 13, Kakarala, et al., US 2004/0051798, discloses the method of claim 12, wherein comparing magnitudes of the difference values with the at least one threshold includes comparing negative difference value magnitudes with the first threshold and positive difference value magnitudes with the second threshold (see figure 5A, steps 514-517: if sign is positive determines threshold using max of gradients (fig. 5B) and if sign is negative determines threshold using min of gradients (fig. 5C)).

In regard to claim 16, Kakarala, et al., US 2004/0051798, discloses an image capturing device, comprising:

a sensor (see figure 1, element 20) having a two-dimensional array of photo-sensitive elements and positioned to have an image with a varying light intensity projected thereacross, the sensor providing signal outputs of the individual elements in sequence according to a level of light intensity projected on the individual elements (see para. 27-29), and

an electronic processor (see figure 1, element 40) receiving the signal outputs of the sensor elements to provide data of image pixels, the processor operating with signal processing that includes, for individual signal outputs of the sensor elements in sequence:

calculating difference values between outputs of the individual element and a plurality of neighboring elements (see figure 5A, steps 504-508 and para 47-52),

determine the signs of the difference values for a given one of the individual elements in sequence (see figure 5A, steps 514 and 516 and para 54),

examine the signs of the difference values (see para 54 and 55: the signs are examined to determine whether the elements is a local maximum or minimum);

if the difference values are not in excess of the threshold, deciding to provide the data of the corresponding image pixel therefrom (see figure figures 5B, step 546 and 5C, step 576), and

if the difference values are in excess of the threshold, calculating the data of the corresponding image pixel from the signal outputs of at least some of the

elements neighboring the individual element (see fig. 5B, step 548 and 5B, step 578).

The Kakarala reference does not specifically disclose if the difference values for the individual element have different signs, deciding to provide data of a corresponding image pixel therefrom without performing any further processing of the signal outputs of the elements to make the decision, and if the difference values for the individual element have the same sign, determining whether the difference values are in excess of a threshold.

The difference values in the Kakarala reference are determined by subtracting the previous neighboring pixel from the target pixel and subtracting the target pixel from the following neighboring pixel (see para 47-52). This makes the evaluation for a local minimum or maximum pixel be determined by whether the difference values have different signs or one is greater than zero and the other is less than zero and is further processed by comparing to a threshold to determine if it is defective (see para 71 and 81). The difference values with the same sign are then determined to be the pixel without defects. This seems reverse from the claimed invention; however since the difference values are not both calculated by subtracting the neighboring pixel from the target pixels, the evaluation for the signs to determine minimum and maximum pixels becomes reversed.

It is well known to one of ordinary skill in the art that the calculation and evaluation in the Kakarala reference is the mathematical equivalent of determining the difference values by subtracting the neighboring pixel value from the target pixel value

for both the previous and following pixels and then determining a local maximum or minimum by whether the difference values have the same sign or both are greater than or less than zero and thus pixels may be defective. Then the difference values with different signs or one is less than zero and the other is greater than zero are the pixels without defects.

Therefore it would have been an obvious design choice to modify the Kakarala reference to determine the difference values by subtracting the neighboring pixel value from the target pixel value for both the previous and following pixels determine a local maximum or minimum by whether the difference values have the same sign or both are greater than or less than zero and thus pixels may be defective, and then the difference values with different signs or one is less than zero and the other is greater than zero are the pixels without defects, in order to save time by not having to compare all the neighboring pixels to determine none defective pixels. The modified Kakarala reference would then disclose wherein if the difference values for the individual element have different signs, deciding to provide data of a corresponding image pixel therefrom without performing any further processing of the signal outputs of the elements to make the decision, and if the difference values for the individual element have the same sign, determining whether the difference values are in excess of a threshold.

***Allowable Subject Matter***

1. Claims 4, 5, 14 and 15 are allowed.
2. The following is a statement of reasons for the indication of allowable subject matter:

Claims 4 and 5 are allowable for the reasons stated in the last office action.

In regard to claims 14 and 15, the prior art does not disclose a method with the combination of limitations specified in the claimed invention, specifically the limitations of:

wherein comparing magnitudes of the difference values with the at least one threshold includes comparing individual difference value magnitudes with one of the first or second threshold quantities depending upon a distance of the neighboring element from the given element that is used to calculate the difference value, as stated in claim 14;

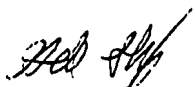
wherein said at least one threshold includes a plurality of threshold quantities that are different from each other, and wherein comparing individual difference value magnitudes with the at least one threshold includes comparing a difference value magnitude with one of the plurality of threshold quantities selected on the basis of (a) whether the sign of the difference value magnitude is positive or negative and (b) a distance between the given element and the neighboring elements used to calculate the difference value., as stated in claim 15.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gevell Selby whose telephone number is 571-272-7369. The examiner can normally be reached on 8:00 A.M. - 5:30 PM (every other Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lin Ye can be reached on 571-272-7372. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
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gvs